

CLAIMS

1. (Original) Steel for the production of high-strength components with excellent low-temperature toughness, having the following composition (in % by weight):

C: 0.08 to 0.25 %,
Si: 0.10 to 0.30 %,
Mn: 0.80 to 1.60 %,
P: = 0.020 %,
S: = 0.015 %,

the sum of the P and S content being = 0.030 %,

Cr: 0.40 to 0.80 %,
Mo: 0.30 to 0.50 %,
Ni: 0.70 to 1.20 %,
Al: 0.020 to 0.060 %,
N: 0.007 to 0.018 %,
V: = 0.15 %,
Nb: = 0.07 %,

the sum of the V and Nb content being = 0.020 %, the remainder being iron and inevitable impurities.

2. (Currently Amended) Steel according to Claim 1, ~~characterised in that~~ wherein its C content is from 0.16 % by weight to 0.23 % by weight.

3. (Currently Amended) Steel according to Claim 1 ~~any one of the preceding claims, characterised in that~~ wherein its Mn content is from 1.00 % by weight to 1.35 % by weight.

4. (Currently Amended) Steel according to Claim 1 ~~any one of the preceding claims, characterised in that~~ wherein its Cr content is from 0.40 % by weight to 0.65 % by weight.

5. (Currently Amended) Steel according to Claim 1 ~~any one of the preceding claims,~~
~~characterised in that~~ wherein its Mo content is from 0.35 % by weight to 0.50 % by weight.
6. (Currently Amended) Steel according to Claim 1 ~~any one of the preceding claims,~~
~~characterised in that~~ wherein its Ni content is from 0.75 % by weight to 1.00 % by weight.
7. (Currently Amended) Steel according to Claim 1 ~~any one of the preceding claims,~~
~~characterised in that~~ wherein its Al content is from 0.020 % by weight to 0.045 % by weight.
8. (Currently Amended) Steel according to Claim 1 ~~any one of the preceding claims,~~
~~characterised in that~~ wherein its N content is from 0.007 % by weight to 0.015 % by weight.
9. (Currently Amended) Steel according to Claim 1 ~~any one of the preceding claims,~~
~~characterised in that~~ wherein it has an austenite grain size that is finer than ASTM 10.
10. (Currently Amended) Use of a steel composed according to Claim 1 ~~any one of the preceding claims~~ for the production of high-strength components by cold forming with subsequent temper-hardening.
11. (Currently Amended) Use according to Claim 10, ~~characterised in that~~ wherein the components are means for the carrying, pulling, lifting, conveying or securing of loads.
12. (Currently Amended) Use according to Claim 10, ~~characterised in that~~ wherein the components are means for the connection of structural elements.
13. (Currently Amended) Use according to Claim ~~any one of Claims 10 to 12,~~
~~characterised in that~~ wherein the components are chains.
14. (Currently Amended) Use according to Claim 13, ~~characterised in that~~ Wherein the chains are round steel chains.

15. (Currently Amended) Use according to ~~either Claim 13 or Claim 14~~, characterised ~~in that~~ wherein the chains are welded.
16. (Currently Amended) Use according to Claim ~~any one of Claims 10 to 15~~, characterised ~~in that~~ wherein the components have a strength of at least 1,200 MPa.
17. (Currently Amended) Use according to Claim 16, characterised ~~in that~~ wherein the strength is at least 1,550 MPa.
18. (Currently Amended) Use according to ~~either Claim 16 or Claim 17~~, characterised ~~in that~~ wherein the strength is at least 1,600 MPa, in particular at least 1,650 MPa.
19. (Currently Amended) Use according to Claim ~~any one of Claims 10 to 18~~, characterised ~~in that~~ wherein at a strength of at least 1,550 MPa, the fracture appearance transition temperature FATT of the components is at most -60°C .
20. (Currently Amended) Use according to Claim ~~any one of Claims 10 to 19~~, characterised ~~in that~~ wherein the notch impact working value is more than 45 J.
21. (Currently Amended) Use according to Claim ~~any one of Claims 10 to 20~~, characterised ~~in that~~ wherein the material of the component has a technical crack initiation toughness J_{IC} of more than 170 N/mm^2 .
22. (Currently Amended) Use according to Claim 21, characterised ~~in that~~ wherein the technical crack initiation toughness J_{IC} is more than 185 N/mm^2 .
23. (Currently Amended) Use according to Claim ~~any one of Claims 10 to 22~~, characterised ~~in that~~ wherein the components exhibit an elongation at break of more than 28%.